

according to UK REACH Regulation

Epoxy Resin L 285

Revision date: 07.08.2023

Product code: 110115

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Epoxy Resin L 285

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Binding agent

1.3. Details of the supplier of the safety data sheet

no. Details of the supplier of the sure		
Company name:	R&G Faserverbundwerkstoffe GmbH	
	Composite Technology	
Street:	Im Meißel 7 - 13	
Place:	D-71111 Waldenbuch	
Post-office box:	1145	
	D-71107 Waldenbuch	
Telephone:	+49 (0)7157 5304-60	Telefax: +49 (0)7157 5304-70
e-mail:	info@r-g.de	
Contact person:	Michael Groß	
Internet:	www.r-g.de	
Responsible Department:	Management	
1.4. Emergency telephone	Vergiftungs-Informations-Zentrale Freiburg	
number:	Tel: +49 (0)761 19240	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

Bis-[4-(2,3-epoxipropoxi)phenyl]propane

1,2,3-Propanetriol,polymer with 2-(chloromethyl)oxirane Warning

Signal word:

Pictograms:



Hazard statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.



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Precautionary statements

P103	Read carefully and follow all instructions.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing
	protection.
P273	Avoid release to the environment.
P308+P311	IF exposed or concerned: Call a doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405	Store locked up.
P501	Dispose of waste according to applicable legislation.

2.3. Other hazards

Results of PBT and vPvB assessment: not applicable

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name					
	EC No	Index No	ndex No REACH No			
	Classification (GB CLP Regulation)					
1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]p	propane		50 - < 55 %		
	216-823-5	603-073-00-2	01-2119456	6619-26		
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H319 H317 H411					
25038-04-4	1,2,3-Propanetriol,polymer with 2-(chloromethyl)oxirane					

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity				
	Specific Conc. Limits, M-factors and ATE						
1675-54-3	216-823-5	bis-[4-(2,3-epoxipropoxi)phenyl]propane	50 - < 55 %				
	dermal: LD50 = 2000 mg/kg; oral: LD50 = 11400 mg/kg Skin Irrit. 2; H315: >= 5 - 100 Eye Irrit. 2; H319: >= 5 - 100						
25038-04-4		1,2,3-Propanetriol,polymer with 2-(chloromethyl)oxirane	50 - < 55 %				
oral: LD50 = 500 mg/kg							

Further Information

There are no additional ingredients present which, according to the supplier's current knowledge, are classified in theare classified as harmful to health or the environment in the applicable concentrations, are PBT or vPvB substances or substances of equivalent concern, or which have an occupational exposure limit and therefore need to be reported in this section.

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Where appropriate artificial ventilation. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin irritation, seek medical treatment.



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After contact with eyes

Immediately flush eyes with plenty of water and occasionally lift upper and lower eyelids. Check for contact lenses and remove if present. Seek medical attention if irritation occurs.

After ingestion

Rinse the mouth with water. Remove the affected person to fresh air and immobilize in a position that facilitates breathing. If the substance has been swallowed and the affected person is conscious, give small amounts of water to drink. Do not induce vomiting unless specifically instructed to do so by medical personnel. Seek medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed

On eye contact: Causes serious eye irritation. Inhalative: No particular effects or hazards known. In case of skin contact: Causes skin irritation. May cause an allergic skin reaction. Ingestion: Harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Provide symptomatic treatment.

In case of ingestion or inhalation larger quantities, contact a poison specialist immediately.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water mist, extinguishing powder, foam, carbon dioxide.

Unsuitable extinguishing media

jet of water

5.2. Special hazards arising from the substance or mixture

When heated or in a fire, a pressure increase occurs and the container may burst. This material is toxic to aquatic organisms and has long-term effects. Fire-fighting water contaminated with this material must be contained and must not enter water courses, sewers or drains.

Hazardous thermal decomposition products: Carbon dioxide. Carbon monoxide. halogenated compounds.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

For non-emergency personnel

No action should be taken that involves personal risk or has not been adequately trained. Evacuate the area. Deny access to non-essential and unprotected personnel. Do not touch or walk on spilled substance. Avoid inhalation of vapour or mist. Ensure adequate ventilation. Wear respirator if ventilation is inadequate. Put on suitable personal protective equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Collect spillage.

6.3. Methods and material for containment and cleaning up



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For containment

Small amount released:

Eliminate leakage if safe to do so. Remove container from the discharge area. Dilute with water and wipe up if water soluble. Alternatively, or if insoluble in water, absorb with an inert dry material and place in a suitable waste container. Dispose of via a recognised waste disposal company.

Large amount released:

Eliminate leakage if safe to do so. Remove container from the release area. Approach the release with the wind. Avoid entry into drains, waterways, cellars or enclosed areas. Flush spilled material to a waste water treatment plant or proceed as follows. Contain spillage with non-combustible absorbent (e.g. sand, earth, vermiculite, diatomaceous earth) and place in a designated container for disposal in accordance with local regulations. container. Dispose of via a recognised waste disposal company. Contaminated absorbents can be as hazardous as the material released.

Other information

Stop leak if safe to do so. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Clear contaminated areas thoroughly.

6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide adequate ventilation. Avoid contact with skin, eyes and clothes. Do not breathe gas/fumes/vapour/spray. Use personal protection equipment. People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this mixture. Avoid contact during pregnancy and while nursing. Avoid release to the environment.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. When using do not eat, drink or smoke. When using do not eat or drink. Avoid contact with eyes and skin. Do not breathe gas/fumes/vapour/spray. Keep away from food, drink and animal feedingstuffs.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions

Store according to local regulations. Store only in the original container. Protect from direct sunlight. Store only in dry, cool and well-ventilated areas. Do not store together with incompatible substances and with foodstuffs and beverages. Keep containers tightly closed and sealed until use. Containers that have been opened should be carefully closed and stored upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containers to avoid environmental contamination.

7.3. Specific end use(s)

Binding agent

SECTION 8: Exposure controls/personal protection



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8.1. Control parameters

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]propane			
Consumer DN	IEL, acute	dermal	systemic	3,6 mg/kg bw/day
Consumer DN	IEL, acute	inhalation	systemic	0,75 mg/m³
Consumer DNEL, acute		oral	systemic	0,75 mg/kg bw/day
Consumer DN	IEL, long-term	dermal	systemic	3,6 mg/kg bw/day
Consumer DN	IEL, long-term	inhalation	systemic	0,75 mg/m³
Consumer DN	IEL, long-term	oral	systemic	0,75 mg/kg bw/day
Worker DNEL	, acute	dermal	systemic	8,3 mg/kg bw/day
Worker DNEL, acute		inhalation	systemic	12,3 mg/m ³
Worker DNEL, long-term		dermal	systemic	8,3 mg/kg bw/day
Worker DNEL	, long-term	inhalation	systemic	12,3 mg/m ³

PNEC values

CAS No	Substance				
Environmental compartment Value					
1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]propane				
Freshwater 0,006 mg/l					
Marine water 0,0003 m					
Freshwater sediment 0,5 mg/kg					
Marine sediment 0,5 mg/kg					
Micro-organisms in sewage treatment plants (STP)					
Soil	Soil				

Additional advice on limit values

No exposure limit value is known.

8.2. Exposure controls





Appropriate engineering controls

No special ventilation requirements. Good normal room ventilation should be sufficient to limit worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process chambers, local exhaust ventilation or other engineering to keep worker exposure below recommended or regulatory limits.

Individual protection measures, such as personal protective equipment

Eye/face protection

If the risk assessment so requires, protective eyewear complying with a recognised standard should be worn to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, then the following protective equipment must be worn unless the assessment requires a higher level of protection: Chemical resistant goggles.

Hand protection

Wear suitable gloves.



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Suitable material: NBR (Nitrile rubber) (730 Camatril), Butyl caoutchouc (butyl rubber) (898 Butoject) Breakthrough time:: >= 480 min

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Before handling this product, personal protective equipment should be selected based on the task to be performed and the risks involved, and approved by a specialist.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Emissions from ventilation and process equipment should be checked to ensure that they meet the requirements of environmental legislation. In some cases, air scrubbers, filters or engineering changes to process equipment will be required to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	light yellow	
Odour:	weak characteristic	
Odour threshold:	Not available (not measured)	
		Test method
Melting point/freezing point:	Not available (not measured)	
Boiling point or initial boiling point and boiling range:	Not available (not measured)	
Flammability:	Not available (not measured)	
Lower explosion limits:	Not available (not measured)	
Upper explosion limits:	Not available (not measured)	
Flash point:	> 100 °C	
Auto-ignition temperature:	Not available (not measured)	
Decomposition temperature:	Not available (not measured)	
pH-Value:	Not available (not measured)	
Viscosity / kinematic:	Not available (not measured)	
Water solubility:	practically insoluble	
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:	Not available (not measured)	
Vapour pressure:	not determined	
Density:	1,140 g/cm³	
Relative vapour density:	Not available (not measured)	
9.2. Other information		
Information with regard to physical h	azard classes	
Explosive properties		
The product is not: Explosive.		
Self-ignition temperature		
Solid:	Not available (not measured)	
Gas:	Not available (not measured)	
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Oxidizing properties Not available (not measured)

Other safety characteristics

Evaporation rate: Viscosity / dynamic: (at 25 °C)

Not available (not measured) 600-900 mPa·s ISO 9371

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, no hazardous decomposition products should be formed.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Harmful if swallowed.

CAS No	Chemical name							
	Exposure route	Dose		Species	Source	Method		
1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]propane							
	oral	LD50 mg/kg	11400	Rat M	Manufacturer			
	dermal	LD50 mg/kg	2000	Rabbit	Manufacturer			
25038-04-4	1,2,3-Propanetriol,polymer with 2-(chloromethyl)oxirane							
	oral	LD50 mg/kg	500	No data available				

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Sensitising effects

May cause an allergic skin reaction. (bis-[4-(2,3-epoxipropoxi)phenyl]propane)

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.



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Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]propane						
	Acute fish toxicity	LC50	1,3 mg/l		Oncorhynchus mykiss (Rainbow trout)	Manufacturer	
	Acute crustacea toxicity	EC50	2,1 mg/l		Daphnia magna (Big water flea)	Manufacturer	

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]propane	2.65 - 3.78
BCF		

CAS No	Chemical name	BCF	Species	Source
1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]propane	3 - 31 31.00		

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH. not applicable

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

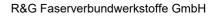
13.1. Waste treatment methods

Disposal recommendations

Waste generation should be avoided or minimised wherever possible. Disposal of this product and its solutions and by-products must be carried out at all times in compliance with environmental protection requirements and waste disposal legislation and the requirements of local authorities. Surplus and products not suitable for recycling should be disposed of through a recognised waste disposal company. Do not discharge untreated waste into the sewerage system unless all applicable regulations of the authorities are complied with. The classification of the product may meet the criteria for hazardous waste.

Contaminated packaging

Waste generation should be avoided or minimised wherever possible. Disposal of this product and its solutions





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and by-products must be carried out at all times in compliance with environmental protection requirements and waste disposal legislation and the requirements of local authorities. Surplus and products not suitable for recycling should be disposed of through a recognised waste disposal company. Do not discharge untreated waste into the sewerage system unless all applicable regulations of the authorities are complied with.

Waste and containers must be disposed of in a safe manner. Take care when handling empty containers that have not been cleaned or rinsed. Empty containers and liners may contain product residues. Avoid dispersal and run-off of released material and contact with the soil, water bodies, drains and sewers.

SECTION 14: Transport information

Land transport (ADR/RID)

UN 3082 14.1. UN number or ID number: 14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxipropoxi)phenyl]propane, 1,2,3-Propanetriol,polymer with 2-(chloromethyl)oxirane) 14.3. Transport hazard class(es): q ш 14.4. Packing group: Hazard label: 9 Limited guantity: 5 L Excepted quantity: F1 Transport category: 3 Inland waterways transport (ADN) 14.1. UN number or ID number: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-14.2. UN proper shipping name: [4-(2.3-epoxipropoxi)phenyl]propane. 1.2.3-Propanetriol.polymer with 2-(chloromethyl)oxirane) 14.3. Transport hazard class(es): q 14.4. Packing group: Ш Hazard label. q Limited quantity: 51 Excepted quantity: E1 Marine transport (IMDG) 14.1. UN number or ID number: UN 3082 14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxipropoxi)phenyl]propan, 1,2,3-propanetriol, polymer with 2-(chloromethyl)oxirane) 14.3. Transport hazard class(es): 9 14.4. Packing group: Ш Hazard label: q Limited quantity: 5 L Excepted quantity: E1 EmS: F-A, S-F



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Segregation group:	1 - acids			
Air transport (ICAO-TI/IATA-DGR)				
14.1. UN number or ID number:	UN 3082			
<u>14.2. UN proper shipping name:</u>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ([4-(2,3-epoxipropoxi)phenyl]propan, 1,2,3-propanetriol, polymer with 2 (chloromethyl)oxirane)			
14.3. Transport hazard class(es):	9			
<u>14.4. Packing group:</u> Hazard label:	III 9			
	<u>́</u>			
Excepted quantity:	E1			
<u>14.5. Environmental hazards</u>				
ENVIRONMENTALLY HAZARDOUS:	Yes			
Danger releasing substance:	Bis-[4-(2,3-epoxipropoxi)phenyl]propane			
 <u>14.6. Special precautions for user</u> No information available. <u>14.7. Maritime transport in bulk according to</u> not applicable 	o IMO instruments			
SECTION 15: Regulatory information				
15.1. Safety, health and environmental regul	ations/legislation specific for the substance or mixture			
EU regulatory information Restrictions on use (REACH, annex XVII):				
Entry 3, Entry 75				
2010/75/EU (VOC):	0,00%			
Information according to 2012/18/EU (SEVESO III):	E2 Hazardous to the Aquatic Environment			
National regulatory information				
Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juve work protection guideline' (94/33/EC). Observe employment restriction under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.	าร		
Water hazard class (D):	2 - obviously hazardous to water			
15.2. Chemical safety assessment				
Chemical safety assessments for substances in this mixture were not carried out.				

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,8,9,10,13,14,15.

Abbreviations and acronyms

CLP: Classification, labelling and Packaging REACH: Registration, Evaluation and Authorization of Chemicals GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals UN: United Nations





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CAS: Chemical Abstracts Service DNEL: Derived No Effect Level DMEL: Derived Minimal Effect Level PNEC: Predicted No Effect Concentration ATE: Acute toxicity estimate LC50: Lethal concentration, 50% LD50: Lethal dose, 50% LL50: Lethal loading, 50% EL50: Effect loading, 50% EC50: Effective Concentration 50% ErC50: Effective Concentration 50%, growth rate NOEC: No Observed Effect Concentration BCF: Bio-concentration factor PBT: persistent, bioaccumulative, toxic vPvB: very persistent, very bioaccumulative MARPOL: International Convention for the Prevention of Marine Pollution from Ships IBC: Intermediate Bulk Container SVHC: Substance of Very High Concern For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.	
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H319	Causes serious eye irritation.	
H411	Toxic to aquatic life with long lasting effects.	

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)